

REMARKS

Applicant respectfully requests reconsideration. Claims 1-8, 10-37, 52, 63-65, 68, 69, 75 and 90 were previously pending in this application. Claim 1 is amended herein. Withdrawn claims 2-5, 11-12, 21-22, 25-37, 52, 63-65, 68, 69, 75, and 90 have been canceled. Withdrawn claims 13-16 and 20 which are species of and depend from claim 1 are not canceled. Claims 1, 6-8, 10, 17-19, and 23-24 are still pending for examination with claim 1 being an independent claim and claims 13-16 and 20 being withdrawn. No new matter has been added.

Rejection Under 35 U.S.C. 112

Claims 1, 6-8, 10, 17-19, 23, 24 and 90 have been rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. According to the Office the claims lack enablement because the oligonucleotides do not include an unmethylated CpG motif. Claim 1 has been amended to clarify that the CG dinucleotide at the 5' end of the molecule is an unmethylated CG dinucleotide. It is requested that the rejection be withdrawn.

Rejection Under 35 U.S.C. 102

Claims 1, 6-8, 10, 17-19 and 90 have been rejected under 35 U.S.C. 102(b) as being anticipated by Klinman et al. (WO 00/61151; publication date October 19, 2000). According to the Office Klinman et al discloses several oligonucleotides having the formula of claim 1. It is asserted that SEQ ID NO: 5 (tcgactctcgagcgttctc) falls within the scope of the claimed formula because it includes a 5' TCG and does not include an unmethylated CG motif in N₁. The Office has also maintained that the oligonucleotides of SEQ ID NO: 117, 119, 120, 133 and 135 fall within the scope of claim 1.

Klinman et al does not anticipate claim 1 because Klinman et al does not disclose oligonucleotides falling within the scope of claim 1. In particular SEQ ID NO:5 does not meet each of the limitations of claim 1. The formula recited in claim 1 is 5'TCGX₁X₂N₁3', including the limitation that N₁ is 2-95 nucleotides and does not include an unmethylated CG motif. If SEQ ID NO:5 were written in the format of the formula of claim 1, it would read as follows: TCG, X₁ is A,

X₂ is C and N₁ is tctcgagcgttctc. N₁ of SEQ ID NO:5 includes 2 additional unmethylated CG dinucleotides (underlined). The Office has asserted that SEQ ID NO: 5 does not include unmethylated CG dinucleotides in N₁. However, on page 10 lines 16-19 it is taught that the oligonucleotides of Table 1 (which includes SEQ ID NO: 5) include a central unmethylated CpG motif. Thus, at least one of the two underlined CG dinucleotides in N₁ of SEQ ID NO:5 is unmethylated. Further, the oligonucleotides are synthetic (paragraph spanning pages 9-10). Synthetic oligonucleotides generally include an unmethylated C unless otherwise specified. If a methylated C were added during the synthesis, the reference would indicate that the oligonucleotide includes a methylated C. Thus, the oligonucleotide of SEQ ID NO:5 includes additional unmethylated CG dinucleotides and thus fall outside the scope of claim 1 of the instant application.

The Office has also maintained the rejection of claim 1 in view of oligonucleotides of SEQ ID NO: 117, 119, 120, 133 and 135. In support of maintaining the rejection the Office has indicated that while the cited oligonucleotides have lengths of 12 nucleotides, Klinman et al teaches generally that oligonucleotides can have lengths of 13-100 nucleotides or 13-40 nucleotides. (Office Action page 4 citing page 3, lines 16-25 of Klinman et al).

The disclosure of the oligonucleotides of SEQ ID NO: 117, 119, 120, 133 and 135 in Klinman et al does not anticipate the claimed invention. The Office argues that while the oligonucleotides of SEQ ID NO: 117, 119, 120, 133 and 135 don't have the appropriate length to fall within the scope of the claims, that these oligonucleotides could be modified to meet the length requirements of the claim based on teachings in Klinman et al with respect to the preferred lengths of oligonucleotides. The fact that the oligonucleotides as disclosed in Klinman et al do not meet the length requirement of the instant claims is sufficient evidence that such oligonucleotides do not anticipate the claim. A general teaching in a reference about preferred properties is not sufficient to change the properties of a specific molecule described therein. An oligonucleotide having the structural properties of the oligonucleotides of SEQ ID NO: 117, 119, 120, 133 and 135 but which is greater than 12 nucleotides in length is not disclosed in Klinman et al. Therefore, Klinman et al does not anticipate the pending claims. The rejection under 35 U.S.C. 102(b) in view of Klinman et al. (WO 00/61151) should be withdrawn.

Claims 1, 6-8, 10, 17-19 and 90 have been rejected under 35 U.S.C. 102(b) as being anticipated by Peterson et al. (WO 95/03407; publication date February 2, 1995). In particular it is asserted that SEQ ID NO: 11 and 27 of Peterson et al fall within the formula of claim 1.

Peterson et al does not anticipate the claimed invention because none of the oligonucleotides disclosed by Peterson et al fall within the oligonucleotides of claim 1 or the claims dependent thereon. Claim 1 is directed to oligonucleotides having the following formula: 5'TCGX₁X₂N₁3' wherein N₁ does not include an unmethylated CG motif. Both SEQ ID NO:11 and SEQ ID NO: 27 include N₁ having additional unmethylated CG dinucleotides. N₁ of SEQ ID NO: 11 is gcccctcgccctcttgccgtg, with the unmethylated CG dinucleotides underlined. N₁ of SEQ ID NO: 27 is cctgtcgggtcccctcg, with the unmethylated CG dinucleotides underlined. According to Peterson et al the oligonucleotides are synthesized using procedures known in the art (page 31). As discussed above, synthetic oligonucleotides generally include an unmethylated C unless otherwise specified. Therefore, Peterson et al does not anticipate the pending claims. The rejection under 35 U.S.C. 102(b) in view of Peterson et al. (WO 95/03407) should be withdrawn.

Claims 23 and 24

Applicants acknowledge that claims 23 and 24 are not rejected in view of the prior art.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, the Director is hereby authorized to charge any deficiency or credit any overpayment in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 23/2825, under Docket No. C1037.70038US01.

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Respectfully submitted,

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